

WHAT IS CLAIMED IS:

1. A heat fixing apparatus for fixing an unfixed image formed on a recording material, comprising:

5 a fixing member;

a pressure member in a pressed contact with said fixing member to form a fixing nip through which the recording material bearing the unfixed image is passed;

10 a conductive member coming into contact with the recording material and positioned in a downstream side of said fixing nip in a conveying direction of the recording material; and

bias applying means which applies a bias  
15 voltage to at least either of the fixing member and the conductive member;

wherein, in case image formations on a plurality of recording materials are executed in continuation, the bias applying means elevates and  
20 lowers the bias voltage in the course of said image formations executed in continuation.

2. A heat fixing apparatus according to claim 1, wherein the image formations on the recording  
25 materials are judged to be executed in continuation in case a situation continues where a supply of a succeeding recording material is started before a

trailing end of a preceding recording material passes the fixing nip portion.

3. A heat-fixing apparatus according to claim 1,  
5 wherein said bias apply means includes:

first bias applying means for applying a bias of a polarity same as that of a toner to said fixing member; and

second bias applying means for applying a bias  
10 of a polarity opposite to that of the toner to said conductive member and said pressure member;

wherein, in case of heat fixing the recording materials supplied in continuation in the fixing nip portion, said first bias applying means and said  
15 second bias applying means are switched to generate bias voltages elevated and lowered for every fixed or variable number of the recording materials.

4. A heat-fixing apparatus according to claim 1,  
20 wherein, in case said fixing member and said pressure member are in a direct contact without the recording material, in an interval between said preceding recording material and said succeeding recording material, a direction of an electric field between  
25 said fixing member and said pressure member is inverted from a direction of the electric field in a state in which the recording material is present in

the fixing nip portion.

5. A heat-fixing apparatus according to claim 1,  
wherein a rectifying element is connected to a  
5 conductive portion of said pressure member, and, at a  
heat fixation of the recording material, the  
conductive portion of said pressure member is  
maintained at a polarity opposite to that of the  
toner.

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6. An image forming apparatus for executing an  
image formation by conveying a recording material to  
an image forming unit and conveying said recording  
material to a heat fixing apparatus thereby fixing an  
15 unfixed image to the recording material, wherein the  
heat fixing apparatus includes:

a fixing member;

a pressure member in a pressed contact with  
said fixing member to form a fixing nip through which  
20 the recording material bearing the unfixed image is  
passed;

a conductive member coming into contact with  
the recording material and positioned in a downstream  
side of said fixing nip in a conveying direction of  
25 the recording material; and

bias applying means which applies a bias  
voltage to at least either of the fixing member and

the conductive member;

wherein, in case image formations on a plurality of recording materials are executed in continuation, the bias applying means elevates and  
5 lowers the bias voltage in the course of said image formations executed in continuation.

7. An image forming apparatus according to claim 6, wherein the image formations on the  
10 recording materials are judged to be executed in continuation in case a situation continues where a supply of a succeeding recording material is started before a trailing end of a preceding recording material passes the fixing nip portion.

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8. An image forming apparatus according to claim 6, wherein said bias apply means includes:

first bias applying means for applying a bias of a polarity same as that of a toner to said fixing  
20 member; and

second bias applying means for applying a bias of a polarity opposite to that of the toner to said conductive member and said pressure member;

wherein, in case of heat fixing the recording  
25 materials supplied in continuation in the fixing nip portion, said first bias applying means and said second bias applying means are switched to generate

bias voltages elevated and lowered for every fixed or variable number of the recording materials.

9. An image forming apparatus according to  
5 claim 6, wherein, in case said fixing member and said pressure member are in a direct contact without the recording material, in an interval between said preceding recording material and said succeeding recording material, a direction of an electric field  
10 between said fixing member and said pressure member is inverted from a direction of the electric field in a state in which the recording material is present in the fixing nip portion.

15 10. An image forming apparatus according to claim 6, wherein a rectifying element is connected to a conductive portion of said pressure member, and, at a heat fixation of the recording material, the conductive portion of said pressure member is  
20 maintained at a polarity opposite to that of the toner.